

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
)	
Marc Glazer, Jacqueline Fidanza,)	Parent Examiner: Hai Vo
Glenn McGall, Curtis Frank, and)	
Richard Vinci)	
)	Parent Art Unit: 1771
Serial No.: TBA (Divisional of USSN 09/545,207))	
)	
Filed: Herewith)	
)	
Title: Porous Silica Substrates for Polymer)	
Synthesis and Assays)	

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.97-1.99, Applicants hereby submit the enclosed PTO Forms 1449.

This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. § 1.56 and is being filed with the above-identified application.

Under 35 USC §120, this application relies on the earlier filing date of application serial number 09/545,207, filed on April 7, 2000 and provisional application serial number 60/128,402, filed April 8, 1999. Hard copies of the references identified on the PTO Form 1449 were submitted to and/or cited by the Office in the prior patent application(s) and, therefore, are not provided in this application.


In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. § 102 or § 103.

Please apply any charges or credits to Deposit Account No. 19-0733.

Respectfully submitted,

Dated:

November 4, 2003



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USPTO Form 144 9		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No. 03848-00132		Serial No. TBA		
INFORMATION DISCLOSURE CITATION Sheet 1 of 5				Applicants: Marc I. Glazer, et al.				
				Filing Date: Herewith			Group: TBA	
U.S. PATENT DOCUMENTS								
Examiner Initial		Patent No.	Date	Name	Class	Subclass	Filing Date (if appropriate)	
	AA	3,640,093	02/08/72	Levene et al.	65	134	07/22/69	
	AB	4,220,461	09/02/80	Samanta	65	22	04/06/78	
	AC	4,426,216	01/17/84	Satoh et al.	65	18.1	01/17/84	
	AD	4,528,010	07/09/85	Edahiro et al.	65	18.1	07/09/85	
	AE	4,765,818	08/23/88	Che et al.	65	18.1	08/23/88	
	AF	5,009,688	04/23/91	Nakanishi	65	18.3	04/23/91	
	AG	5,143,854	09/01/92	Pirrung et al.	436	518	03/07/90	
	AH	5,252,743	10/12/93	Barrett et al.	548	303.7	11/13/90	
	AI	5,288,514	02/22/94	Ellman	427	2	09/14/92	
	AJ	5,384,261	01/24/95	Winkler et al.	436	518	11/22/91	
FOREIGN PATENT DOCUMENTS								
Examiner Initial		Document No.	Date	Country	Class	Subclass	Translation	
							YES	NO
	AK	EP 0 348 041 A	12/27/89	EPO				
	AL	EP 0 368 279	05/16/90	EP				
	AM	JP 8151232 A	06/11/96	Japan				
	AN	WO 89/10977	11/16/89	PCT				
	AO	WO 89/11548	11/30/89	WO				
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)								
	AP	Antonietti, et al., "Synthesis of Mesoporous Silica with Large Pores and Bimodal Pore Size Distribution by Templating of Polymer Latices", (1998) <i>Advanced Materials</i> 10:2, pp. 154-159						
	AQ	Arshady et al., "Peptide Synthesis. . . .", <i>J. Chem. Soc. Perkin. Trans.</i> , 1:529-537 (1981)						
	AR	Chaiken, "Semisynthetic Peptides and Proteins," <i>CRC Crit. Rev. Biochem.</i> , 11:255-301 (1981)						
	AS	Chee et al., "Accessing Genetic Information with High-Density DNA Arrays," <i>Science</i> , 274:610-614 (1996)						
EXAMINER					DATE CONSIDERED			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant. **Copies of references not provided at the time of this submission.								

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INFORMATION DISCLOSURE CITATION Sheet 2 of 5				Applicants: Marc I. Glazer et al.				
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U.S. PATENT DOCUMENTS								
Examiner Initial		Patent No.	Date	Name	Class	Subclass	Filing Date (if appropriate)	
	BA	5,405,783	04/11/95	Pirrung et al.	436	518	04/11/95	
	BB	5,409,683	04/25/95	Tillotson et al.	423	338	04/25/95	
	BC	5,412,087	05/02/95	McGall et al.	536	24.3	04/24/92	
	BD	5,424,186	06/13/95	Fodor et al.	435	6	12/06/91	
	BE	5,445,934	08/29/95	Fodor et al.	435	6	08/29/95	
	BF	5,451,683	09/19/95	Barrett et al.	548	302.7	04/23/93	
	BG	5,510,270	04/23/96	Fodor et al.	436	518	09/30/92	
	BH	5,527,681	06/18/96	Holmes	435	6	11/05/92	
	BI	5,541,061	07/30/96	Fodor et al.	435	6	04/29/92	
	BJ	5,545,531	08/13/96	Rava et al.	435	6	06/07/95	
	BK	5,547,839	08/20/96	Dower et al.	435	6	12/06/90	
FOREIGN PATENT DOCUMENTS								
Examiner Initial		Document No.	Date	Country	Class	Subclass	Translation	
							YES	NO
	BL	WO 92/10092	06/25/92	WO				
	BM	WO 92/20702	11/26/92	WO				
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)								
	BN	Cho et al., "An Unnatural Biopolymer," <i>Science</i> , 261:1303-1305 (1993)						
	BO	de Saizieu et al., "Bacterial Transcript Imaging by Hybridization of Total RNA to Oligonucleotide Arrays," <i>Nature Biotechnology</i> , 16:45-48 (1998)						
	BP	Fodor et al., "Light-Directed, Spatially Addressable Parallel Chemical Synthesis," <i>Science</i> , 251:767-773 (1991)						
	BQ	Forman et al., "Thermodynamics of Duplex Formation and Mismatch Discrimination on Photolithographically Synthesized Oligonucleotide Acids," <i>Am. Chem. Soc. (ACS) Symposium Series</i> 682, Chapter 13, pp. 206-228 (1998)						
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U.S. PATENT DOCUMENTS								
Examiner Initial		Patent No.	Date	Name	Class	Subclass	Filing Date (if appropriate)	
	CA	5,571,639	11/05/96	Hubbell et al.	430	5	05/24/94	
	CB	5,599,695	02/04/97	Pease et al.	435	91.1	02/27/95	
	CC	5,624,711	04/29/97	Sundberg et al.	427	261	04/29/97	
	CD	5,624,875	04/29/97	Nakanishi et al.	501	39	01/18/96	
	CE	5,631,734	05/20/97	Stern et al.	356	317	02/10/94	
	CF	5,639,603	06/17/97	Dower et al.	435	6	11/02/93	
	CG	5,677,195	10/14/97	Winkler et al.	436	518	11/20/92	
	CH	5,710,000	01/20/98	Sapolsky et al.	435	6	06/07/95	
FOREIGN PATENT DOCUMENTS								
Examiner Initial		Document No.	Date	Country	Class	Subclass	Translation	
							YES	NO
	CI	WO 95/11995	05/04/95	WO				
	CJ	WO 97/10365	03/20/97	WO				
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)								
	CK	Glazer et al. in <i>Organic/Inorganic Hybrid Materials II</i> , Volume 576 (L.C. Klein, L.F. Francis, M.R. De Guire, J.E. Mark, editors) (proceedings of the Materials Research Society meeting, Spring 1999) pp. 371-376						
	CL	Holland et al., "Synthesis of Macroporous Minerals with Highly Ordered Three-Dimensional Arrays of Spheroidal Voids", <i>Science</i> , 281, pp. 538-540 (1998)						
	CM	Kaiser et al., "Peptide and Protein Synthesis by Segment Synthesis-Condensation," <i>Science</i> , 243:187-192 (1989)						
	CN	Kent, "Chemical Synthesis of Peptides and Proteins," <i>Ann. Rev. Biochem.</i> , 57:957-989 (1988)						
	CO	Lockhart et al., "Expression Monitoring by Hybridization to High-Density Oligonucleotide Arrays," <i>Nature Biotechnology</i> , 14:1675-1680 (1996)						
	CP	McGall et al., "The Efficiency of Light-Directed Synthesis of DNA Arrays on Glass Substrates", <i>J. Am. Chem. Soc.</i> 119:22, pp. 5081-5090 (1997)						
EXAMINER					DATE CONSIDERED			
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Applicants: Marc I. Glazer, et al.

Filing Date: Herewith

Group: TBA

U.S. PATENT DOCUMENTS

Examiner Initial		Patent No.	Date	Name	Class	Subclass	Filing Date (if appropriate)
	DA	5,744,101	04/28/98	Fodor et al.	422	131	02/14/95
	DB	5,744,305	04/28/98	Fodor et al.	435	6	06/06/95
	DC	5,770,358	06/23/98	Dower et al.	435	6	09/16/92
	DD	5,795,716	08/18/98	Chee et al.	435	6	10/21/94
	DE	5,800,992	09/01/98	Fodor et al.	435	6	06/25/96
	DF	5,831,070	11/03/98	Pease et al.	536	25.3	04/19/96
	DG	5,837,832	11/17/98	Chee et al.	536	22.1	05/16/95
	DH	5,843,655	12/01/98	McGall	435	6	09/18/95
	DI	5,858,462	01/12/99	Yamazaki	427	226	07/18/96
	DJ	5,858,659	01/12/99	Sapolsky et al.	435	6	11/29/95

FOREIGN PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Country	Class	Subclass	Translation	
							YES	NO
	DK	WO 97/39151 A	10/23/97	PCT				

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

	DL	McGall et al., "Light-Directed Synthesis of High -Density Oligonucleotide Arrays Using Semiconductor Photoresists", <i>Proc. Natl. Acad. Sci</i> 93, pp. 13555-13560 (1996)						
	DM	Merrifield, "Solid Phase Synthesis," <i>Science</i> , 232:341-347 (1986)						
	DN	Merrifield, "The Total Synthesis of an Enzyme with Ribonuclease A Activity," <i>J. Am. Chem. Soc.</i> , 91:501-502 (1969)						
	DO	Pease et al., "Light-generated Oligonucleotide Arrays for Rapid DNA Sequence Analysis", <i>Proc. Natl. Acad. Sci</i> 91, pp. 5022-5026 (1994)						
	DP	Proudnikov et al., "Immobilization of DNA in Polyacrylamide Gel for the Manufacture of DNA and DNA-Oligonucleotide Microchips, <i>Anal. Biochem.</i> 259, pp. 34-41 (1998)						
	DQ	H. Scholze "New Possibilities for Variation of Glass Structure", <i>J. Non-Crystalline Solids</i> 73:669-680 (1985)						

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Sheet 5 of 5

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Group: TBA

U.S. PATENT DOCUMENTS

Examiner Initial		Patent No.	Date	Name	Class	Subclass	Filing Date (if appropriate)
	EA	5,861,242	01/19/99	Chee et al.	435	5	01/09/97
	EB	5,919,523	07/06/99	Sundberg et al.	427	333	10/24/97
	EC	5,981,956	11/09/99	Stern	250	458.1	05/15/97
	ED	6,025,601	02/15/00	Trulson et al.	250	461.2	06/09/97
	EE	6,040,138	03/21/00	Lockhart et al.	435	6	09/15/95
	EF	6,228,575	05/08/01	Gingeras et al.	435	5	02/07/97
	EG	6,262,216	07/17/01	McGall	528	10	10/13/98

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Examiner Initial		Document No.	Date	Country	Class	Subclass	Translation	
							YES	NO
	EH	WO 98/41534 A	09/24/98	PCT				

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

	EI	Subramania et al., "Optical Photonic Crystals Fabricated From Colloidal Systems", <i>Applied Physics Letters</i> 74:26, pp. 3933-3935 (1999)					
	EJ	Subramania et al., "Ordered Macroporous Materials by Colloidal Assembly: A Possible Route to Photonic Bandgap Materials", <i>Advanced Materials</i> , 11:15, pp. 1261-1265 (1999)					
	EK	Velev et al., "Porous silica via colloidal crystallization" <i>Nature</i> 389, pp. 447-448 (1997)					
	EL	Wijnhoven et al., "Preparation of Photonic Crystals Made of Air Spheres in Titania", <i>Science</i> 281, pp. 802-804 (1998)					
	EM	"Chemistry for Automated DNA Synthesis," <i>PCR-Mate EP Model 391 DNA Synthesizer User's Manual</i> , Applied Biosystems, Section 6, pp. 1-24 (2002)					
	EN	<i>Sol-Gel Science: The Physics and Chemistry of Sol-Gel Processing</i> (C.J. Brinker and G.W. Scherer, editors) Academic Press, 1990, pp. 787-797					

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